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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/785,010 | 02/25/2004 | Shinpei Komatsu | 614.1639D2DDD1 | 9725 |
| 21171 | 7590 | 03/02/2006 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | THAI, TUAN V | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2186 | |

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,010

Applicant(s)

KOMATSU ET AL.

Examiner

Tuan V. Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/292,213.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/4 and 5/27/4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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Part III DETAILED ACTION

Specification

1. This office action responsive to communication filed 05/27/2004. Claims 1-4 are presented for examination.
2. Applicant is reminded of the duty to fully disclose information under 37 CFR 1.56.
3. The foreign prior art (Doc. Number: 62-283496 and 62-283497) listed on the PTO-1449 (February 25, 2004) has not been considered. There is no apparent nexus between the cited Japanese prior art and the current claims, it would be improper to indicate consideration of the foreign language documents absent a concise statement of relevance.

Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tawara et al. (USPN: 4,926,415); hereinafter Tawara, in view of Kosonocky et al. (USPN: 5,361,343); hereinafter Kosonocky.

As per claim 1, Tawara discloses the invention as claimed including a method of managing a memory device, memory 24 and 18 (e.g. see figure 4) having a memory area and a controller (controller 22/16) for controlling data writing in the memory area (e.g. see figure 4, column 4, lines 28 et seq.), the method comprises sending to the controller a size of data to be written into the memory area is equivalently taught as a size detection detect a size information which is sent to the CPU 14 (e.g. see column 4, lines 33 et seq.; also see column 8, lines 10 et seq.). Tawara, however does not particularly disclose estimating a length of time to be required for writing the data into the memory area on a basis of the size/condition of the data of the memory area. Kosonocky discloses the missing element that is known to be required in the system of Tawara in order to arrive at the Applicant's current invention wherein Kosonocky discloses in determining the writing/programming time based on the size of the data or memory array of flash EEPROM (e.g. see column 2, lines 4 et seq.). Accordingly, it would have been obvious to one having ordinary skill in the art at the

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time the current invention was made to utilize the teaching of Kosonocky for that of Tawara system wherein the size/condition of the data is used for determining the writing/programming of the data into the memory. In doing so, it would allow the writing/programming time to be predetermined based on the data size in order to free-up the controller for other activities, it further avoids excess of time allocation in data programming, reduce data fragmentation, therefore being advantageous.

As per claim 2, the further limitation of estimating electric power required for writing the data on a basis of the length of time is taught by the combination of Kosonocky and Tawara to the extent that it is being claimed, since it further known that time required for writing of data or data programming is also a function and being proportional to the power consumption; by this rationale, claim 2 is rejected.

As per claim 4, it would further obvious to one of ordinary skill in the art to readily recognize that if the data can not be written into the memory for the predetermined or estimated time amount, a malfunction of the memory device must be existed; by this rationale, claim 4 is rejected.

Allowable subject matter

6. Claim 3 is objected to as being dependent upon a rejected base claim 2, but would be allowable if rewritten in independent form including all of the limitations of the base claim and

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intervening claims. The prior art of record do not teach nor disclose checking whether the data can be written into the memory area by using available electric power after the electric power is determined.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Thai whose telephone number is (571)-272-41287. The examiner can normally be reached from 6:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew M. Kim can be reached on (571)-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

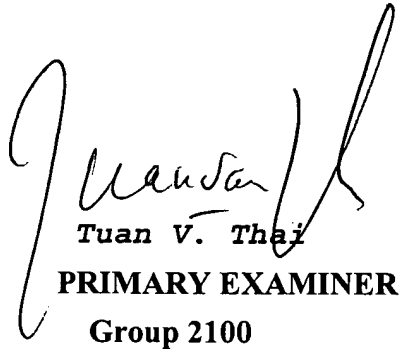
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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVT/January 28, 2006



Tuan V. Thai
PRIMARY EXAMINER
Group 2100